

Regenerative Agriculture

AT MAGGIE MARILYN

Maggie Marilyn



An intro from Maggie

It is undeniable that the biggest threat humanity faces today and in the coming decades is that of global environmental collapse, with many communities who have played a smaller role in it's creation already experiencing it's devastating effects.

At its core, this crisis is not simply one of overconsumption, but of a lack of reciprocity. Reciprocity asks that whenever we take from the earth we also give something back, and that by doing so we can regenerate the natural world. This isn't a hypothetical concept; it's already being practiced by ecological systems where balance and harmony are only achieved through the process of giving and taking. Plants take carbon dioxide and give oxygen, mammals return the nutrients to the soil when they die, and coral reefs are built on the exchange of shelter for food between two species.

Humans constantly take from the earth while failing to consider what each of us have to give, and Maggie Marilyn believes the need for us to look after the planet should be seen less as an obligation and more as a reminder that we belong here. That, although we might currently be the problem, we still play a vital role in the earth's system and therefore can be part of the

solution. This report is the culmination of Maggie Marilyn's education, research and understanding of what it means to give and take from the planet with integrity, whilst navigating a growing business.

Although it is the backbone of our economy agriculture is responsible for nearly half of New Zealand's greenhouse gas emissions.¹ Recent statistics show that our country has the highest proportion of threatened indigenous species in the world,² with 82% of river lengths in pastoral farming areas no longer suitable for swimming and 76% of our native freshwater fish at risk of extinction.³ Globally, conventional farming practices have reduced the productivity of 23% of the earth's entire land surface, while using a staggering 70% of the earth's freshwater supply. The basic premise of agriculture relies on nature,⁴ yet in the past century the sector has strayed so far from its rule that it now threatens the very hand that feeds it.

This is where regenerative agriculture comes in.

As a young fashion brand on a mission to transform the fashion industry from one built on the antithesis of reciprocity to one that is transparent, circular, regenerative and inclusive, everyday we are tasked with making

complex decisions and compromises. And deciding where, and from whom, we source our raw natural materials is an area of the business we find hugely challenging. Finding out the working conditions and environmental impacts of the farms producing natural fibres is not easy; it requires us to be steadfast in retrieving information from long and complex supply chains who often don't want us asking questions, or have never asked the questions themselves.

This report allowed Maggie Marilyn, alongside our sustainability consultancy, Go Well Consulting, to dive deep into the world of regenerative agriculture and educate ourselves on not only what the term means, but how we may use it to reshape and rethink the role we play in the earth's systems and in doing so help to regenerate them.

With hope and determination

Maggie Hewitt.

¹ environment.govt.nz/publications/new-zealands-greenhouse-gas-inventory-1990-2019-snapshot

² wgti.ac.nz/business/about/news/archive/nz-has-worlds-highest-proportion-of-species-at-risk

³ environment.govt.nz/assets/Publications/Files/our-2-freshwater-2020-summary.pdf

⁴ [Introduction MFE report, Our Freshwater 2020](#)





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Introduction

Our purpose at Maggie Marilyn is to use fashion to create a better world. We believe in an economic system that is circular, regenerative, transparent and inclusive. A system that shares prosperity with all its stakeholders, not just the shareholders.

In making our garments we are committed to using the best quality fabrics that are kind to both people and the planet. Yet we know that the production of textiles plays a significant part in the harmful impact the fashion industry has on our planet's environment and people.

Our commitment to being a circular fashion brand means we are taking all steps and actions we can, with the control and influence we have, to ensure we decrease our demand for new (aka virgin) materials, and therefore decrease our extractive impact on the natural world. The steps we have taken to date (and will continue to take) include:

- A fully transparent supply chain from farm to finished garment for all virgin sourced natural fibres.
- Designing and manufacturing our garments to be durable and long lasting.
- Designing and manufacturing our Somewhere garments to be easier to recycle or compost.⁵

- Engaging, educating, and empowering our community to repair their own clothes and [how best to care for their clothes](#).
- Launching a take-back programme for MM garments to be repaired, repurposed, recycled or composted.
- Confronting the historical culture within the fashion world of not “repeat wearing”.
- Launching our no sale policy.
- Relaunching our unsold garments from earlier releases (Archive Launch).
- Collecting cotton offcuts for textile recycling with Little Yellow Bird.
- Incorporating [deadstock fabric](#); [ECONYL® regenerated nylon](#); [Post-Consumer Waste Recycled Polyester](#).
- Continually researching how we can increase the amount of recycled fibres in our garments.
- Launching RESTORE, a platform on our website dedicated to restoring unsaleable garments to saleable garments with embroidered hearts.

With all that said, for the foreseeable future we will continue to need to extract virgin fibres from our natural world. And the really hard part is, when it comes to progress in this area, we don't know what an achievable goal looks like yet. Recycled materials are evolving, and we look forward to adding more into our core range as we progress and the technology

improves. How much of an emphasis we put on integrating these into our range will be determined by first understanding the data that shows the impact of processes and their durability once applied in a garment. Ultimately, we need to understand the holistic impact of using recycled fibres compared to the impacts of regeneratively farmed virgin fibres before we can make a definitive decision.

In the meantime, we remain committed to making sure our virgin materials are extracted and produced in a way that is not just sustainable, but in fact restores, repairs, and regenerates the land and the people who rely on it.

While the term has existed for decades, “regenerative agriculture” has become something of a buzzword lately; both within fashion and textiles, but also within the food industry and agricultural sector at large. But what is regenerative agriculture? Well, perhaps it's best to start with an overview of what we have inherited - the industrial agriculture system.

⁵ Blended fabrics are more difficult to recycle with mechanical recycling practices (the predominant method). To be compostable, a garment must be made from 100% natural fibres, including the stitching and trims, and be free of toxic chemicals.



Industrial Agriculture

The industrialized approach to farming - tilling soils, monocropping, segregating flora and fauna, caging animals, and using petrochemicals and genetically-modified seeds to grow the food we eat and the fibre we wear - referred to in this Report (for ease of reference) as “Industrial Agriculture”, has been the dominant approach since the invention of the Haber-Bosch process. The Haber-Bosch process involves making synthetic nitrogen fertiliser from petrochemicals, and was seen as a revolutionary breakthrough that resulted in the corresponding “Green Revolution”.

And it was a revolution.

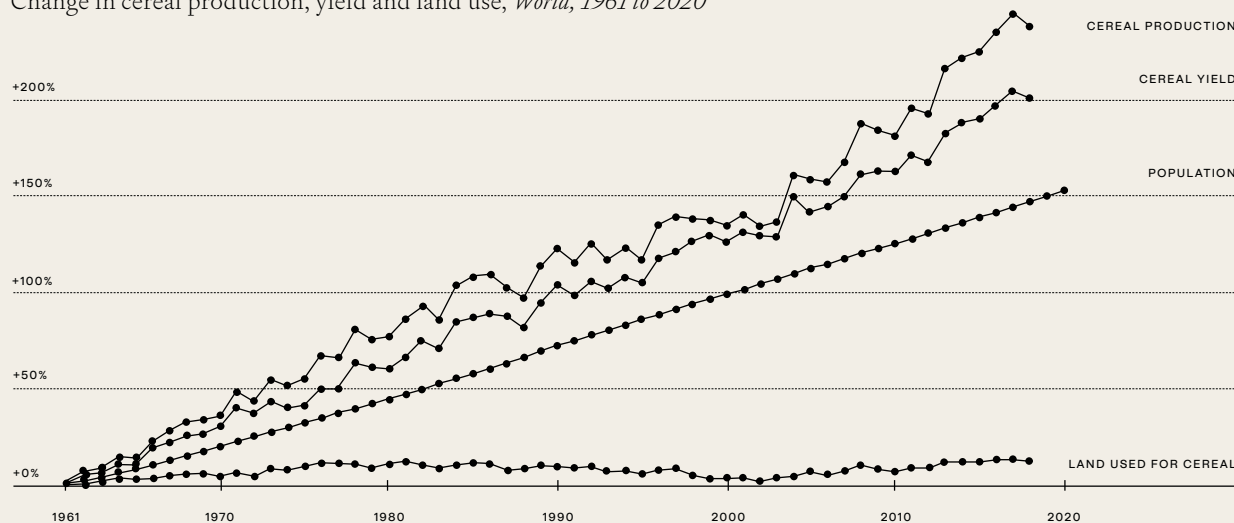
These practices resulted in an enormous increase in yields for the farmers who adopted them, more food and fibre to feed and clothe a growing global population, brought more people out of extreme poverty, and made farming more “efficient”. This was seen as a huge technological breakthrough and a win for everyone - the inventors, Fritz Haber and Carl Bosch, both received a Nobel Prize for their invention (1918 and 1931 respectively).⁷ In the decades that followed, as these industrial methods embedded themselves into the fabric of farming operations, their communities, and the associated businesses

and industries across the globe, the productivity of food and fibre production went through the roof.

This resulted in not only huge increases in the yields of crops farmers grew, but also the rapid mechanization of historically labour intensive

Although there is no doubt synthetic fertilizers were a major contributor there are a number of other factors which are likely to have influenced sustained yield gains: irrigation, increased soil tillage, improved farming practices and the adoption of improved varieties from plant breeding developments.

Change in cereal production, yield and land use, *World, 1961 to 2020*



SOURCE: Our World in Data based on World Bank, Food and Agriculture Organization of the United Nations ourworldindata.org/crop-yields



jobs. Jobs that typically required paying the wages of dozens of people could now be done by paying just one to drive a machine - significantly lowering the costs of production. This “improved efficiency” resulted in a massive drop in the price of crops such as wheat, corn, sugar, rice, and cotton. Price drops that in turn aided the linear economic policies of perpetual growth that have resulted in the normalisation of the gross overconsumption, extraction, and pollution of resources we see today.

This is the economic system we have inherited and is a system that the fashion industry has glamorised for decades.

Despite its benefits, Industrial Agriculture has one inconvenient, and significant, downside: This is not how the natural systems of our planet have evolved to function.

For billions of years plants and animals have cycled nutrients within the ecosystems they occupy in a perfect balance that has allowed them to coexist, and evolve.

The Green Revolution and its resulting Industrial Agriculture practices have disrupted those systems and thrown them out of balance, creating agricultural environments that otherwise would not exist and that local species of plants and animals are not equipped to deal with.

Peer-reviewed scientific studies tells us that this has been a major contributor to the biodiversity and climate crises we now have to solve. Urgently.

“Do the best you can until you know better. Then when you know better, do better.”

— MAYA ANGELOU

Our planet has already warmed by 1.1°C and “averaged over the next 20 years, global temperature is expected to reach or exceed 1.5°C of warming.”⁸ 1.5°C is the key tipping point that peer-reviewed climate research tells us we must stay under to avoid catastrophic runaway and irreversible changes to our global climate.

At the same time we are having to solve our biodiversity crisis. Flora and fauna are “declining globally at rates unprecedented in human history – and the rate of species extinctions is accelerating, with grave impacts on people around the world now likely.”⁹

“The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide.”¹⁰ This is a phenomenon many scientists refer to as the Sixth Mass Extinction.¹¹

Whatever you make of the data and science one thing is clear: Industrial Agriculture is not sustainable with its high input based model.

The good news is that there are solutions available to us. There are ways of growing food and fibre that are not only sustainable but actually restore, repair, and regenerate the environment.

It is a way of farming that is modeled on operating in harmony with how the real world, the natural world, is designed, and how it has worked for billions of years.

This is commonly referred to as ‘regenerative agriculture’.

As a business with the vision of an economic system that is circular, regenerative, transparent and inclusive, we were naturally drawn to the term “regenerative agriculture”. But what does it mean? How is it different from organic? Can we really grow food and fibre at scale in a way that builds soils, sequesters carbon, regenerates biodiversity, and improves farmers health and wellbeing?

Well, we intended to find out.

As we strive to do with all topics at Maggie Marilyn, we first wanted to ensure we understood regenerative agriculture ourselves before we



33% of the Earth's soils are already degraded and over 90% could become degraded by 2050

– STATUS OF THE WORLD'S SOIL RESOURCES 2015

Agriculture accounts for 70% of global fresh-water use

– SPECIAL REPORT ON CLIMATE CHANGE AND LAND, 2016

Agricultural expansion is responsible for almost 90 % of global deforestation

– FAO REMOTE SENSING SURVEY, 2020

Almost 4,000 of our native species are currently threatened with or at risk of extinction.

– ENVIRONMENT AOTEAROA 2019

Farms benefit from the presence of native vegetation. It can prevent erosion, filter nutrients out of water, and reduce the damage caused by floods – all of which increase a farm's sustainability and ability to adapt to change.

- OUR LAND 2021

At least 75 animal and plant species (includes 59 bird species) have become extinct since humans arrived in New Zealand.

– ENVIRONMENT AOTEAROA 2019



started talking about it with our community or made any decisions on a path forward. It was only through undertaking this challenge, and engaging in in-depth conversations with a wide range of people connected with regenerative agriculture that we were able to put together this report of our findings.

And whilst we have produced our findings in this report, we also know our work here is far from finished. There are many other voices, particularly from indigenous perspectives, that we will continue to learn from as we move forward. From our reading and wider conversations, we know that the knowledge and historical context of indigenous communities will play an important role in informing how we can best regenerate our lands. As an example, we already see how regenerative agriculture will benefit (and learn) from mindsets that also

understand and truly live by concepts such as kaitiakitanga and whanganutanga, which underline the importance of guardianship for future generations, as well as our connection with a larger whole - our relationships with people, land and place.

As a brand who believes that nothing is impossible when you combine collective force with brave ideas, we hope you find this report insightful and empowering. We hope it stirs up a renewed energy and spirit to take on the challenges of the fashion industry and demonstrate that while our industry may be one of the biggest contributors to the climate and biodiversity crises, it also means we have the greatest capacity to influence radical, lasting change.

Maggie Marilyn

⁶ Monocropping is the agricultural practice of growing one crop on the same land year after year.

⁷ [britannica.com/technology/Haber-Bosch-process](https://www.britannica.com/technology/Haber-Bosch-process)

⁸ [ipcc.ch/2021/08/09/ar6-wg1-20210809-pr](https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr)

⁹ un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report

¹⁰ Ibid

¹¹ en.wikipedia.org/wiki/Holocene_extinction





Our Challenge

As you'll see below we engaged a number of voices and poured over numerous reports on regenerative agriculture, but what is the role that Maggie Marilyn should play in all of this?

When thinking about this, we can see that one of our biggest challenges lies in communication. How do we clearly and accurately convey the benefits, difficulties, nuances and differences of opinion surrounding regenerative agriculture that we have learnt? How do we do it in a way that reflects all of the subtleties, whilst ensuring we do not lose our audience along the way?

We feel lucky to have such a discerning community at Maggie Marilyn. But, just like us, we appreciate that everyone in that community also has hugely different levels of knowledge to begin with, and different drivers of what is important and engaging to them.

Our challenge then is to take what we have learnt, continue to learn, and decide to do (see [WHAT WE HAVE DECIDED](#)), then package this for our audience to educate, engage, and empower them to further understand both the problems we are facing and the potential solutions that are before us - in this case, regenerative agriculture.





Context

“Regenerative agriculture” is not a new term and it’s not the only one of its kind. As is the case with many other terms before, it has been jumped on by the marketers and branding folk before it could be universally defined and understood. Like terms such as “sustainability”, “biodegradable”, or “carbon positive” there are many different uses and interpretations of the term “regenerative agriculture”. The lack of shared and agreed upon definitions for such terms makes them extremely exposed to misuse, and greenwashing.¹²

To add to the complexity, there are also those who use the term “regenerative” synonymously with “organic”. Similarly, some organisations are currently seeking to coin their own combined phrase - both “organic regenerative agriculture” and “regenerative organic agriculture” exist. We discuss the topic of organic vs regenerative later in the report).

It is important to note that there are multiple different organic certifications available in most countries. Frustratingly, the requirements of each certification standard (i.e. the exact criteria that meet the particular certification’s definition of “organic”) are invariably different. This adds further complexity to the debate around organics and regenerative agriculture.

“Currently NZ has three organic certification agencies, each with their own standards ... some of which still allow practices that would be banned under stricter standards such as those used across the EU. ... This approach has resulted in widespread wariness of the organic sector within NZ and a lack of trust from international markets.”

— GARY HIRSHBERG

In undertaking our research we explored a range of different definitions for the term “regenerative agriculture”, and other similar terms that are currently being used across a range of brands, individuals, and industry bodies. You can read a selection of these in more detail in [Appendix A](#).

Summary

From the research we undertook, it seems that there are the following agreed **outcomes** from farming regeneratively:

- The sequestration of carbon into the soil and improved soil health;
- The improvement of biodiversity on a farm and the local environment (e.g. cleaner air and water,

- and increased populations of native species);
- Improved farmer health and wellbeing;
- Reduced use of synthetic chemicals and fertilisers;
- Continual improvement.

There also seems to be the below agreed **practices** to farm regeneratively:

- No tilling (aka ploughing) of the soil;
- A wide diversity of crops are grown and these crops are rotated;
- Animals and plants are part of the farming;
- No bare soil / the use of cover crops.

And then there are the below **practices** that there seems to be disagreement on:

- The use of synthetic chemicals and fertilisers;
- The use of genetically modified seeds / crops / animals;
- The use of antibiotics (and other veterinary drugs) on animals.

¹² Greenwashing is the practice of misleading customers around the environmental impacts of a business and / or its product(s).





Interviews

To help shape our thinking and help us make sense of the variety of opinions we found in the research, we approached a range of different stakeholders active within the regenerative agriculture space to discuss their views. We spoke with 15 people, spread across 10 different organisations that covered primary producers (farmers), industry bodies, scientists and other private entities. All our conversations were hugely insightful, and we are truly thankful to all of those who provided us their time and expertise (see [PAGE 37](#) for a full list of contributors).

While each interview followed different paths, the following themes regularly emerged during our conversations:

- (A) Definition and key outcomes of regenerative agriculture;
- (B) Comparing 'regenerative agriculture' to organic farming;
- (C) The use of certifications;
- (D) Continuous improvement and data;
- (E) Biodiversity;
- (F) The role of synthetic chemicals and GMO.

Whilst opinion was not always consistent across these, our discussions on the themes contained some of the key lessons we learnt from the engagement. We briefly explore each of these below.

Definition - *it's about the outcomes*

Our interviewees shared various views on whether "regenerative agriculture" should be defined (or redefined). These views ranged from seeing that the term is already well established and understood, to believing Maggie Marilyn has the opportunity to define it for itself (and its own purposes) or, finally, to a strongly held view that focussing on a precise definition for regenerative agriculture is unhelpful.

We also encountered different views on whether we should be using the term "regenerative agriculture" at all. The most common concern we heard from our interviewees was that the term "regenerative agriculture", along the lines of terms like "sustainability", is a fashionable buzz-word that is vulnerable to abuse - i.e. used in

greenwashing. Some interviewees preferred to label principles that others would see fall under the umbrella of regenerative agriculture as "modern smart-farming", "agro-ecology" or "conservation agriculture".¹³ In reflecting on their own use of the term 'regenerative agriculture' (rather than using an alternative), interviewees from one organisation noted that their choice to use the term was driven by the market and its growing recognition of 'regenerative agriculture', particularly overseas.

"This is the language of the market, so rather than change it, let's run with that momentum."

— TIM LOFTUS / NEW ZEALAND MERINO

On one level however, all our interviewees shared a vision that "regenerative agriculture" captures the idea that the agricultural practices in question result in the land and its occupants (flora and fauna) being healthier than before. Put by one of our suppliers, "it simply means to regenerate". Another interviewee boiled their view down to simply: "leave the land better".



Through these kinds of comments, our conversations stressed the importance of focussing on outcomes, not necessarily the particular practices that result in those outcomes. This common view we heard neatly echoes the introduction to ‘regenerative agriculture’ in [Manaaki Whenua’s recent White Paper](#) on the topic described further in the [APPENDIX](#) - “the means are less important than achieving the ends.”¹⁴

Continuous improvement is data driven

If you are focussed on the “ends” or the outcomes of on-farm actions, our interviewees also raised that it was critical for farmers to be held accountable to progressing towards these outcomes. In the course of our conversations, accountability was usually linked back to two elements, which nearly all of our interviewees recognized as central to implementing regenerative agricultural ecosystems:

- (1) Base-line, and then continued data collection; and
- (2) Continuous improvement over time in that data.

Without the reference points provided by data, there are no actual outcomes to illustrate continuous improvement. Improvement can only be seen through changes in the practices employed on a particular farm or from personal anecdotes. The current lack of scientific (rather

than just anecdotal) evidence detailing the benefits of regenerative agriculture, especially in a New Zealand context, is often seen as a barrier to greater uptake and support for ‘regenerative’ practices.

In discussing how data forms a key, underlying feature of regenerative agriculture, some interviewees stressed that farmers need greater assistance in this area. This included help collecting and measuring of data, but also assistance on deciding out what exact data should be gathered itself. Some of our interviewees thought that this could be a particularly new and challenging area for farmers, and an aspect of regenerative farming that could work to its detriment and slow down its uptake. For example the costs and time both to upskill on how to collect the data and in its ongoing collection, as well as (in some cases) a lack of agreed collection methodology (for example, we heard that a uniform approach to measuring soil carbon is not yet firmly agreed by the scientific community) may work to deter farmers from adopting regenerative agriculture - it might be seen as too new, too hard and not worth the investment.

Building on the idea that data collection is necessary, one interviewee in particular strongly conveyed how they believe that having data is the key to ensuring value is attributed to the regenerative actions of farmers

(something our conversations suggested isn’t easily done, at least currently). Their organisation, Toha, looks to (among other things) assetize farm data by assisting with its collection and then packaging it so that it can be used for monetary applications (e.g. provided to a bank or insurance company to develop their products). For them, data is the key way to prove regenerative impacts.

In the same way, some of our other interviewees connected the collection and then sharing of data as the best way to prove regenerative impacts and build greater trust in the stories around regeneration. For these interviewees, data - and collection and reporting - is the fundamental base of their regenerative frameworks and communications:

“If your soil data is not showing improvement – you are not in a regenerative state!”

— DANIELLE STATHAM / GOOD EARTH COTTON

A number of interviewees highlighted the difficulties of obtaining trustworthy, bias-free data. For example, we were told that fibre statistics are often aggregated, which leaves them open for interpretation and misinformation. Similarly, we discussed



how research and corresponding data may be influenced by the vested interests of the research's funder (we know that both certification bodies and fertiliser companies, for example, fund research).

Discussing collection and sharing data on regenerative outcomes, also raised comments around the transparency and traceability of supply chains. For a number of our interviewees, regenerative agriculture also means working with the farmers and engaging in direct relationships - which totally makes sense if you are asking them to collect and share data. This kind of direct engagement was expressed as a way to marry authentic stories with the data around regenerative impact.

What are we measuring?

Rather than focussing on individual practices, our interviewees noted that a range of different factors or principles were important, which aligns with the principles-based approach detailed in recent New Zealand research.¹⁵ It was stressed that regenerative agriculture is a holistic view of farming spanning not just environmental, but social and community elements too. We encountered various views around which of these aspects are most important, ranging

from soil health and carbon sequestration, to biodiversity and to the absence of synthetic pesticides and fertilisers.

As a useful starting point and indication of how broad regenerative agriculture can be, New Zealand Merino's ZQRX framework (developed for New Zealand merino sheep farming) and Good Earth Cotton's framework (developed for Australian cotton production) establish key performance indicators for their selected regenerative outcomes (see next page). These indicators create a baseline of information against which the regenerative outcomes and improvements on-farm can be measured year on year.

Soil health and soil carbon (at its most simple, the amount of carbon that is stored in the soil rather than held in the atmosphere) was recognised by many interviewees as a critical measure of regeneration and outcome for regenerative agriculture. In the same breath, some interviewees noted that it was also just one of many important measures, but one that has been stressed by regenerative agriculture advocates recently, given the world's current focus on climate change and greenhouse gas emissions.

Many interviewees also noted the holistic nature of regenerative agriculture, where it focuses beyond the direct land itself,

but on the health and wellbeing of farming communities (the people working the land) as well as the plants and animals on it. We saw a great (anecdotal) example of the wider, social, benefits of regenerative agriculture when speaking to one interviewee. Their pride was clear to see when describing taking other farmers for tours of their regenerative paddocks, highlighting a greater sense of purpose and connection with the land stemming from regenerative agriculture.

There was an opinion given by some interviewees that by practicing regenerative agriculture principles, farmers can see an improvement in their own mental and physical well being. Such reasons given for this impact included:

- less use of chemicals;
- more connected to the land;
- increased purpose on the farm and pride in products produced; and,
- a revitalised interest and passion for farming.

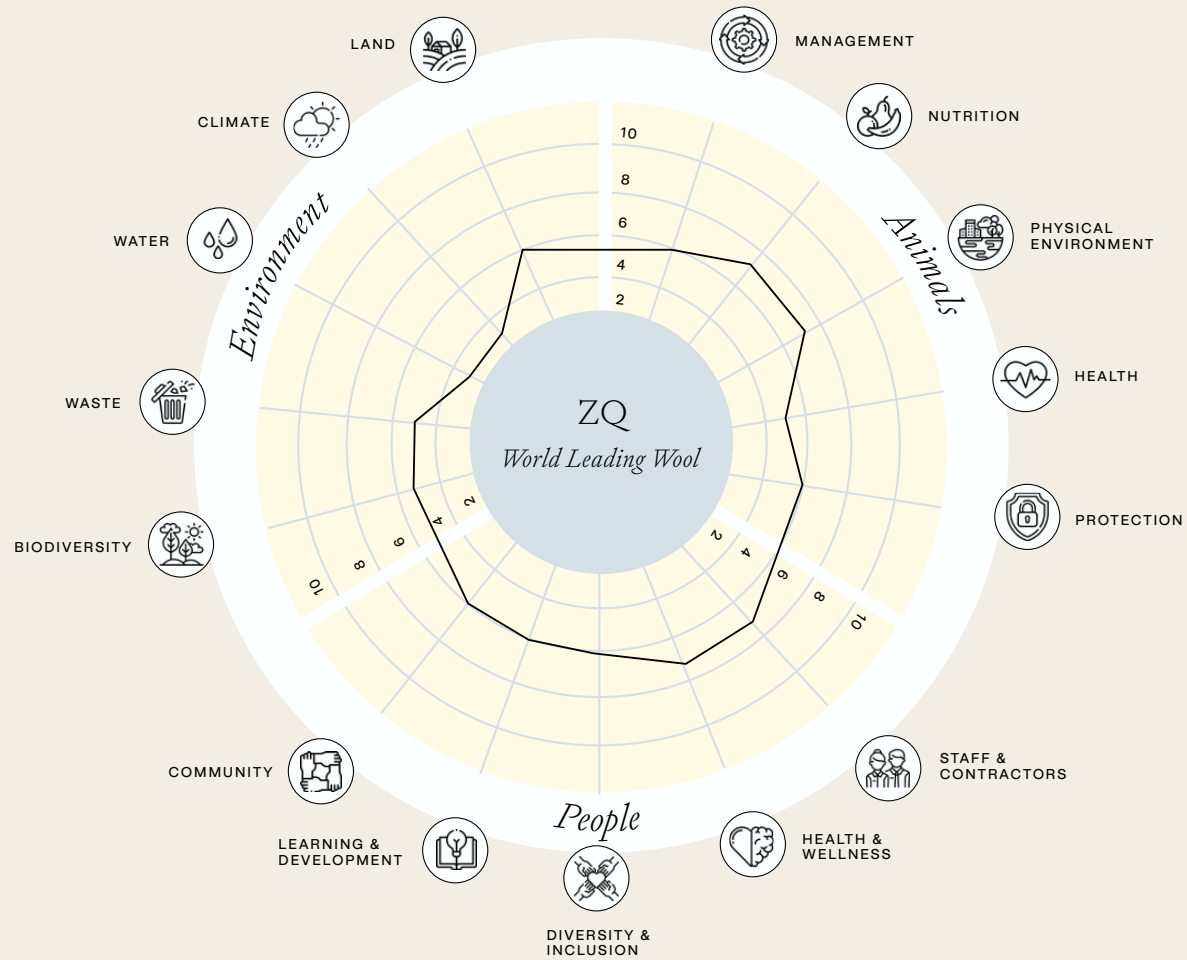
¹⁵ "Conservation agriculture" was coined by the UN's Food and Agriculture Organisation and, while it contains some common principles with regenerative agriculture, it is more narrow than what we understand to comprise regenerative agriculture, focussing on: 1) minimal soil disturbance; 2) permanent soil cover; and 3) species diversification. See www.fao.org

¹⁴ Grelet, Lang et al. Regenerative agriculture in Aotearoa New Zealand - research pathways to build science-based evidence and national narratives. Page 7.

¹⁶ Ibid

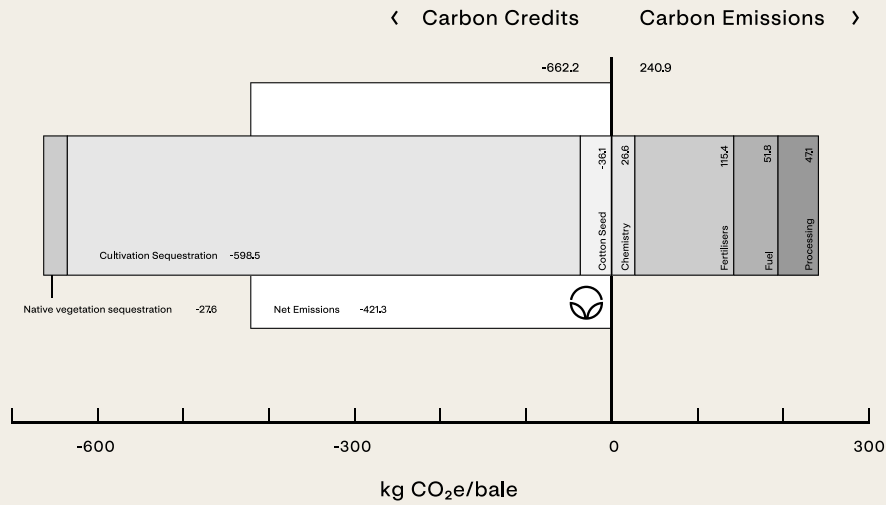


The New Zealand Merino Company ZQRX Framework

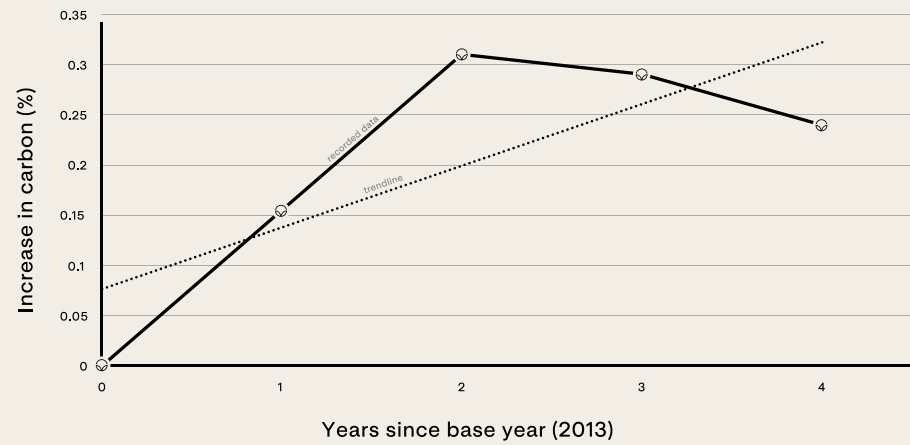


Good Earth Cotton® Framework

Carbon footprint at Good Earth Cotton® Farm,
2017-2018 (kg CO₂e/bale)



Annual increase in soil carbon at
Good Earth Cotton® Farm since 2013



Biodiversity

One particular outcome of regenerative agriculture that jumped out in a number of our conversations was biodiversity.¹⁶ Participants in almost half of our interviews referenced thriving and increased biodiversity was an outcome that regenerative agriculture could deliver on. For this reason, in the words of one interviewee, “diversity has to be part of the conversation” when talking about regenerative agriculture.

These discussions around diversity touched on the benefits arising from increased biodiversity. We won't touch on many here, but these included greater resilience (such as to new pests, but also to harsher and more frequent weather events caused by climate change) and greater natural regeneration of flora from year to year.

For one interviewee, the increase in biodiversity stemming from their adoption of regenerative agricultural practices was linked

to a greater emotional connection to the regenerative movement and their land. As they increased the number of plant species on their land (for reference, this interviewee tries to have 30 pasture species in their ‘regeneratively farmed’ paddocks) and implemented other regenerative principles (e.g. planting native tree shelter belts, increased pest control and retiring marginal land), there were matching increases in the number of birds and insects on the property. For them, this transformation, simple regeneration, reflected (more than the science) the power in regenerative farming.

While this was powerful anecdotal evidence of the benefits of regenerative agriculture, it was also a good example of how regenerative practitioners are currently lacking quantitative data on their regenerative outcomes. This makes it challenging to “prove” the positive impacts they are having, a point repeated by some of our interviewees - this absence of “hard” evidence emboldens some critics of the regenerative movement.

During two interviews it was strongly pointed out that biodiversity is currently not a prominent topic on the radar of many businesses or consumers, at least when compared to climate change. In their views (which was echoed by others), regenerative agriculture poses an opportunity to address (at least partially) the massive biodiversity crisis we are facing (bearing in mind, as one interviewee stressed, that there is often a lag between bringing the issue into the spotlight and then seeing action and results that change it). Or, as another interviewee put it:

“What is more indicative of a regenerative impact than thriving biodiversity?”

— DONNA CHAN / NZ MERINO

¹⁶ The word biodiversity is short for ‘biological diversity’ and simply means the variety of life on earth. - doc.govt.nz/nature/biodiversity



Context Specific

One of the main reasons behind the difference of opinion around definition was the understanding that regenerative agriculture is context specific. Our interviewees repeatedly noted that the farming practices that best regenerate the land will vary from farm to farm, and might even change between different locations on one farm. One interviewee remarked that figuring out exactly what the best approach to take with regards to particular blocks of land was somewhat a process of trial and error. Many remarked that moving to a regenerative manner is a journey that requires time and patience (and, of course, resources).

Other interviewees added to this idea by reflecting that regenerative agriculture, at least at this stage of its development, is a transition. The general view expressed in our conversations was that regenerative agriculture challenges the traditional (or at least more established) wisdom around how land should be farmed and agrochemicals used. As such, implementing more regenerative principles will require us to “rewire traditional views on what ‘good farming’ looks like”. All of our interviewees recognised that greater adoption of regenerative agriculture will not happen overnight.

It was also stressed that bearing context in mind is especially important in Aotearoa New Zealand. Generally speaking, we have greater initial soil health and carbon levels than in the United States where the modern regenerative agriculture movement began. Similarly, many of our existing farming practices (at least in some respects) lead to the natural regeneration of pastures from season to season, preserve soil structure and health, as well as consider the health and wellbeing of the animals and farm workers. Some interviewees mentioned that this was part of the challenge in getting greater regenerative transition in New Zealand - many farmers believe that they are already farming regeneratively. In the same breath, others remarked that this opinion held by some people potentially leads the agricultural community to be complacent and not seek to improve or explore new ways of farming.

Organics

We had a number of in depth conversations around the role of (and differentiation) of organic farming in regenerative agriculture. We encountered a range of views.

Some interviewees were adamant that there was no room for the use of synthetic inputs under the umbrella of regenerative

agriculture. For some, it was synthetic pesticides / herbicides such as glyphosate that were their primary concern, where other interviewees focussed on the need to stop using synthetic fertilisers e.g. nitrogen (rather than the pesticides). For some of these interviewees, being organic was a prerequisite to a farm (and any products connected with it) to be considered regenerative, while other interviewees did not share this same view.

“To be regenerative you can’t be missing key pieces of the puzzle... glyphosate is a no go”

— CHRIS MORRISON / OANZ

Those interviewees who were strongly in favour of ‘organic’ forming a fundamental part of regenerative agriculture generally held the view that the two concepts are linked, rather than are two distinct ones. In one interview’s view, a true expression of organics (which, it was noted by a number of interviewees, often is not what results from an organic certification, or is at least difficult to achieve at an industrial scale) is the same as regenerative agriculture. Another interviewee echoed this in slightly different terms, noting that moving towards organic is a first win and a step on the journey to ‘regenerative’.



On the other hand, other interviewees were reluctant to say that there is a one size fits all approach when it comes to regenerative agriculture and synthetic chemicals. Generally speaking, these interviewees reflected that choices around chemical use are context specific. One of our interviewees noted that “synthetic nitrogen can still be used if the soil balance is understood and maintained with natural crop inputs allowing nature and soil to balance the ecosystem”.

That said, there were also differing opinions within this camp. Some interviewees were agnostic as to the use of synthetic pesticides and fertilisers. Others thought that regenerative agriculture should strive for a reduction of synthetic inputs, ultimately aiming for zero (with this journey backed up by data). In this way, organic practices formed part of the “toolkit” towards regenerative farming, but are not necessarily essential from the outset of a farm’s transition.

In some interviewees’ eyes, prescribing a hardline of no synthetic chemicals failed to realise the difficulties of applying an organic approach in pastoral farming (for example, the considered use of antibiotics may benefit livestock health and wellbeing) or on larger scale farms. Similarly, looking to reduce synthetic inputs, rather than a hard line stance against them, was recognized as a more

achievable approach to support a transition to some interviewees’ vision of regenerative farming. One interviewee in particular reflected that once a farm is established and operating regeneratively, then there should be less tolerance for synthetics, especially synthetic fertilizers.

GMO

During some of our conversations around organics, we also touched on the use of genetically modified organisms (GMO) and its potential place in regenerative agriculture. For some (generally speaking, those in favour of the view that organics is a foundation of regenerative agriculture), the answer was simple - there is a hard line against GMO. Others were less adamant, saying they were unsure, at this stage at least, whether GMO is in direct conflict with the principles of regenerative agriculture.

GM seeds account for 95%
of cotton farming in India.

— THE GUARDIAN

One interviewee conveyed how GMO actively forms part of their transition strategy to (in their eyes) more regenerative outcomes. By employing GMO within their operations, this interviewee can reduce the amount of inputs (both water and chemicals), farm more efficiently with the resources they have and, most importantly for them, increase the amount of carbon sequestered by their crops into the soil.

“GMO seeds have significantly enhanced the environmental outcomes of the Australian cotton industry starting with a reduction of chemical use of 97%.”

— WILL JACKMAN, SUNDOWN PASTORAL COMPANY
FOR GOOD EARTH COTTON®

Although beyond the scope of this report, our conversations highlighted that the challenging debate around GMO must be traced back to the historic adoption of GMO technology, the extent to which it is already embedded throughout our global supply chains, and the impacts should it be more widely adopted.



Certifications

Another topic which highlighted a range of different perspectives was around the use of certifications in the regenerative agriculture space. Some of our interviewees were in favour, others not sure and some opposed.

The main reason for opposition was generally consistent; the certification process was seen as having a confining effect, limiting farmers' focus away from continuous improvement to simply striving for certification in and of itself.

In this context, the organic certification was raised by a number of interviewees as a warning of the dangers of tight or prescriptive definitions that are tied to a certification. It was relatively commonly held that the prescriptive definition of organics and the certification process that has accompanied it has stymied the success (and evolution) of the organic movement. Rather than delivering and communicating holistic benefits (such as reduced water use, increased soil, crop and animal health and higher quality produce), many interviewees recognised that organic certifications (albeit for various reasons) have struggled to inspire better environmental and social farming practices at scale - as many people now hope for the regenerative movement.

For some interviewees, the reason for this (for lack of a better term) struggle, was the certification process, which was seen as having reduced organics to a box-ticking exercise that is focused on deriving a premium price rather than doing what is best for the land and its occupants. For others, a major issue with the certification process was that it doesn't necessarily educate and upskill farmers. Instead, a continuous improvement framework enables you to bring farmers along the journey, and keep progressing towards better environmental and social outcomes.

On the other hand, some of our other conversations highlighted the benefits that the certainty a certification system provides, both to primary producers (i.e. farmers) themselves and to consumers. These conversations highlighted that in terms of marketability and ease of communication in particular, a certification system has obvious strengths.

One interviewee challenged us to describe a trust-based system, without third-party auditing, that has not been manipulated in some way. For them, a certification for regenerative agriculture is necessary to ensure the end products are distinguishable, but also trusted.

In contrast to this, other interviewees not in favour of certification stressed the importance of data and transparency around this. Having clear data, which is readily available, allows farmers (and brands) to authentically communicate the stories of improvements to and regeneration of the land and its occupants, which can build trust in the same (or stronger way) than a certification.

“There is no finish line.”

— FINN ROSS / LAKE HAWEA STATION





CARBON CLEAR
LHS
MERINO

CARBON CLEAR
LHS
MERINO

What We Learnt

This project was a far greater learning opportunity than we first envisaged it would be. Creating A Better World is our overarching mission at Maggie Marilyn and entering into regenerative agriculture seemed a natural progression, however one we needed to ensure we fully educated ourselves first before making any decisions.

We have highlighted our key outtakes from the discussions below and will then outline what this means for us at Maggie Marilyn moving forward.

Certifications

While there can be clear benefits from certifications, regenerative agriculture certifications are very much in their infancy and still not universally agreed upon. This means they currently have minimal recognition and are still likely to generate confusion relating to organic certifications (especially amongst consumers). There is also a real risk that they restrict the ability to evolve and improve upon regenerative agricultural practice.

Context is key

The 'transition' to regenerative agriculture is not one that will happen overnight, it will take time, resources and a plan. The plan or vision will allow and show how the farmers/growers intend to continually improve their practices and make progress towards a regenerative state. We understand regenerative agriculture is context-specific and farming practices that best regenerate the land will vary from farm-to-farm, and potentially yield differing results on a singular farm. This journey will look different for everyone, and we can not expect the same results between fibres or farms.

Holistic approach

Regenerative agriculture takes into consideration everything within its environment. This means something can not be considered "regenerative" if there is an aspect that has not been considered or is ignored.

The wellbeing of everyone, from the animals to the land, to the growers and those further down the supply chain, is important within

regenerative agriculture. And in particular the wellbeing of farmers who, due to the nature of their work and seasonal uncertainty, may experience negative impacts on their mental and physical health. As a brand who prides itself on building strong, reciprocal partnerships, it is important that this is taken into consideration and for us to place value in this area of improvement as a measurable outcome.

Building on the foundation of giving back more than you take, community is also important within regenerative agriculture, and while it will look different to different people and organisations, community can include things like educating younger generations of farmers and growers by sharing knowledge; providing support to certain groups of the community in need; or simply by being an active participant in local events and groups.

Transparency

It is vital that Maggie Marilyn and those we have relationships with remain transparent. Transitioning, or even continuing farming in



a regenerative way, comes with challenges that may differ year-to-year. Being open about these challenges and working towards our shared vision directly with the farmers and growers will ensure that we continue to move in the direction of positive change and improved regenerative practices. Transparency in the supply chain in turn also provides our customers with the information they need to make informed purchasing decisions.

Measuring and collection of data.

Being able to collect data and measure improvements is a crucial part of regenerative agriculture. To truly understand the impact a farm is having, there has to be both qualitative and quantitative information. This includes data in areas such as soil health, biodiversity, water usage, chemicals, tillage, and so on.

One of the greatest challenges we face as an industry, and as a generation, is reducing our carbon emissions. Traditional farming practices are typically high in GHG emissions, and changes to practices like feed management, waste management, reducing nitrogen-use and planting trees can all help mitigate these emissions. Measuring these changes will give substance to ensuring that we are achieving regenerative impacts.

Soil carbon is another critical measure for our farmers and growers, ourselves, and our customers to understand the level of regeneration taking place. While some consider our local New Zealand soil to already possess naturally greater initial soil health and carbon levels compared to other countries, testing this will ensure farmers and growers are continually looking at new ways to improve. We acknowledge that there are still challenges with the reliability of these tests as discussed earlier, however there is confidence this accuracy will improve over time as technology and our understanding develops as it is a key contributor to understanding regenerative impact. Maggie Marilyn will continue to follow the latest science as it relates to regenerative agriculture.

Biodiversity

Biodiversity is fundamental to regenerative agriculture, and increasing biodiversity on farms may look different from farm to farm. Increasing biodiversity might look like protecting and introducing new bird species, introducing new pastoral (grass) species, or simply allowing space for native flora and fauna to regenerate (aka 'rewild'), all of which would promote a more diverse and resilient ecosystem.

Chemicals

In our conversations with various farmers, we learned about the complexities of a “no chemicals” stance, and the challenges that can come with this when undertaken at larger-scale farming. Instead, we believe it is best to adopt a stance of “continual reduction of synthetic inputs” for the farms we are engaging with.

Ultimately, our biggest takeaway was that a regenerative impact requires a balance of many factors, and there is no singular way that can be deemed “right” or “superior”, nor can it be replicated exactly year on year. What we can agree on is that the pursuit of continuous improvement is the surest way to achieving greater outcomes and, ultimately, *A Better World*.





What We've Decided

So, where have we landed?

First and foremost we have decided to continue with the use of the term “regenerative agriculture”. Secondly, we have developed an initial skeleton framework (see [PAGE 32](#)) to assist with communicating to our stakeholders and our customers what we mean when we use the term regenerative agriculture.

Taking into consideration all that we've learned as outlined above, we decided that the best next step was for us to co-design, alongside our farmers and growers, a framework that will enable us to understand, measure, monitor and communicate the regenerative impacts our supply chain is having on the planet.

Our research has broadened our understanding of what regenerative agriculture means to Maggie Marilyn, to a point where we have a pretty good idea of the outcomes that we would like our framework to focus on. That being said, we also recognise that we are far from experts in this field! So taking our vision and some proposed outcomes we see as most important to us, we plan to collaborate with our suppliers to co-design our regenerative framework over the next 12+ months.

We are opting for a co-design approach in acknowledgement that our farmers and growers know their land and outputs best. We want to be on this journey with them, rather than set a list of requirements in isolation from them. We also think that a co-design approach enables us to set the metrics and baselines with which we assess progress on regenerative outcomes, together.

Once finalised, we see our framework being used as a scorecard that will act as the foundation for our collaboration with farmers and growers. It will ensure our vision of having a regenerative impact on the planet and people is not just aligned throughout our supply chain, but can be measured and continually improved on. It will be a framework for Maggie Marilyn to understand where our farms are on their journey to having a regenerative impact, as well as a tool for communicating to our customers who are actively on this journey with us.

Our Framework So Far

So whilst we are not in a position to provide a detailed and finalised framework (including the metrics and baselines by which we will track the various regenerative outcomes) on the

following pages is an initial vision of what our regenerative framework will look like. Beside each of the outcomes we intend to track, we have included some ideas of specific metrics and/or aspects we intend to measure within that outcome (as to how exactly, we'll need some help!). These are what we will develop with our farmers and growers.

The proposed regenerative outcomes are designed to capture a holistic picture of farming. In doing this, we break them down into our three key pillars, People, Planet and Prosperity - each of which overlap and interlink.

Reflecting on what we have learnt during this project, our proposed regenerative outcomes are not yet set in stone. Similarly, we are sure that the metrics and baselines that we set will change and develop over time; and may vary between farms and locations.

We have also learnt that we will need to continue to learn and take lessons from different players within the regenerative movement. In particular, we know that indigenous voices have important insights into regenerative thinking that we will need to build into our own approach as we continue to develop our relationships on farm.

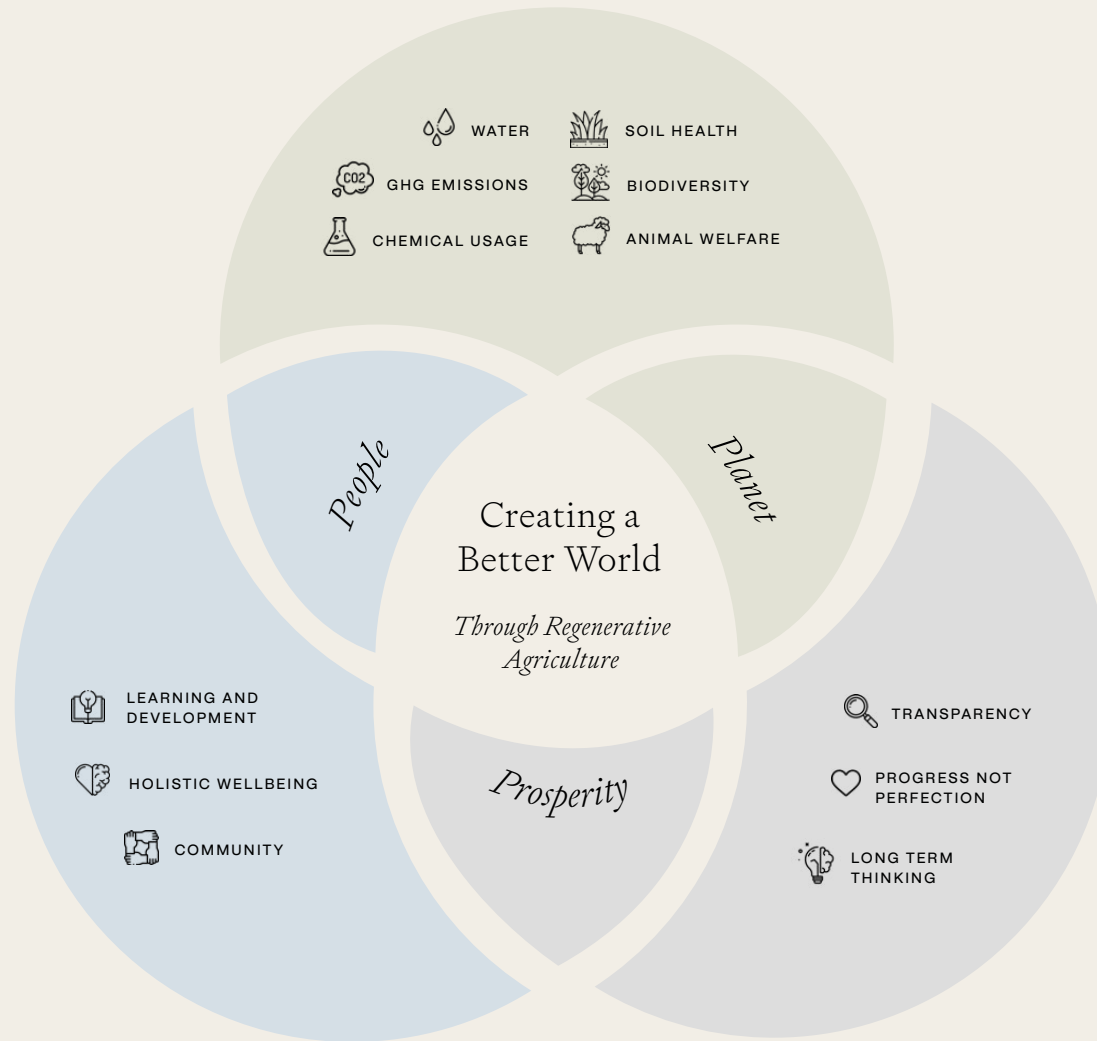


Similarly, we recognise that many of the people we spoke to as part of this project have experience with regenerative agriculture from a New Zealand-centric perspective (which generally reflects a deep knowledge of pastoral and vinicultural farming). Increased exposure to regenerative perspectives on fibre growing, especially cotton farming, will be an important area for us to deepen.

We are excited to have made it this far in our journey, and look forward to bringing you along for the rest of the ride as we march bravely toward *Creating A Better World*.



Maggie Marilyn Regenerative Agriculture Framework



People



LEARNING AND DEVELOPMENT

Improved efficiency, use of technology, continuing personal development for farm workers, data gathering efforts and reflection on data.



HOLISTIC WELLBEING

Physical / mental health, farmer enjoyment / stress, farmer connection with their community and job (including satisfaction), reciprocal relationships between farm and community.



COMMUNITY

Active in community, local employment and investment, sharing of knowledge / skills within the community.

Prosperity



TRANSPARENCY

Openness with data and practices, status of dialogue between Maggie Marilyn, the farmer and other stakeholders, degree of information sharing relating to progress and ideas, collaboration within (and outside) of industry.



PROGRESS NOT PERFECTION

Continuous improvement, farmer strategy to improve, data collection and sharing.



LONG TERM THINKING

Long term focus in farm planning / goals / strategy, enabling future generations to farm successfully, building resilience.

Planet



WATER

Efficiency, improved water quality / ecologies, improved management and increased resilience to water events / scarcity.



SOIL HEALTH

Improved structure, increase of organic matter, water capacity, reduce soil disturbance / erosion, increase soil carbon and soil biodiversity.



CHEMICAL USAGE

Reduce towards zero, reduced leaching / contamination.



BIODIVERSITY

Increase diversity of species (above soil, e.g. insects, plants, birds), increase native species (or reduction in pests / exotics), ecosystem creation (e.g. native forest).



ANIMAL WELFARE

Nutrition, improved health measures, elimination of suffering (disease prevention), reduce mortality rates.



GHG EMISSIONS

Reduce towards zero / become positive, sequestration activity.



Once the actual metrics and baseline are decided,
we see our score looking something like this:

EXAMPLE

OUTCCOME	CHALLENGES / NOTES	BASELINE	CHANGE SINCE PREVIOUS YEAR	SCORE
Water	Farm located on east coast of South Island NZ and receives limited natural rainfall, so heavily reliant on irrigation.	65,000 L (2020)	50,000L. Reduced by 15,000L	TBD
Community	Farm location is remote with minimal dwellings within 50km radius.	No community engagement	Hosted 2 separate schools for overnight stays to experience on farm operations.	TBD





Conclusion

Maggie Marilyn believes education is crucial to taking positive action. It helps us to first understand the impacts of the systems we have inherited, and from there it equips us with the knowledge, skills, values and attitudes needed to act as agents of change.

We thank you for joining us, learning with us, challenging us and changing alongside us. Thank you to all of the thought leaders, change makers and supporters who helped us understand their perspective and gave us countless hours of valued feedback to shape our path forward.

It is from this place of deep gratitude that Maggie Marilyn continues on the journey we started on five years ago, knowing that it's less about reaching a particular number or target within a set period of time, and more about creating reciprocal relationships with mother earth and the people we work with, and fundamental change that will create a better world.



Acknowledgements

We would like to sincerely thank all of those who have contributed to our knowledge and journey within the regenerative agriculture space so far.

In particular, we want to acknowledge the invaluable contribution of the following, who kindly donated their time and expertise in writing this report. We are proud, as believers in creating a better world, to have had the opportunity to collaborate with you - we all must continue to work together if we have any chance to address the wicked challenges that lay before us.

Keep up your amazing work!

Chris Morrison (Chairperson) Organics Aotearoa New Zealand / Simon Millar (Executive Director) PureAdvantage
Sam Duncan (Co-Founder, CEO) FarmLab / Danielle Statham (Co-founder), Kara Hurry (Marketing Advisor), Will Jackman (Agronomist) Good Earth Cotton / Geoff Ross, Justine Troy, Finn Ross (PhD Candidate at the Blue Carbon Lab), Jack Mansfield (Farm Manager) Lake Hawea Station / Alice Norton (Marketing Executive), Donna Chan (Regenerative Transformation Manager), Tim Loftus (General Manager Sales & Marketing) New Zealand Merino / Erin Crampton (Community Director) Calm the Farm Ella Gordon-Latty (Venture Development Manager) Toha / Gwen Grelet (Senior Researcher) Manaaki Whenua Landcare Research / Nick Morrison (Founding Director), Frankie McKeefry (Sustainability Consultant) Go Well Consulting

MM Team - Maggie Hewitt / Georgia Lloyd / Kate Hewitt / Madeleine Walker / Amelia Meadowcroft





Appendix

Below we set out some existing definitions and / or explanations of regenerative agriculture by a range of different organisations.

Regenerative agriculture in Aotearoa New Zealand– research pathways to build science-based evidence and national narratives

This recently published (February 2021) white paper was the result of an intensive collaboration between more than 70 New Zealand-based organisations and 200 people, to provide information and perspectives on what being “regenerative” might mean for New Zealand farming systems. Led by Our Land and Water, The NEXT Foundation and Manaaki Whenua – Landcare Research, we have reproduced some of the paper’s many helpful insights below:

“An overview of the definitions of ‘regenerative agriculture’ (229 journal articles and 25 practitioner websites) showed that they are mostly based on processes, outcomes, or both. Users should hence “define it comprehensively for their own purpose and context””

“However, Regenerative Agriculture is much more than a system of farming: it is a mindset that questions the status quo, and instead of

becoming defeatist, sees opportunities for different ways of living, working and farming. RA aligns with growing worldwide societal and consumer demands for safer, healthier, environmentally sound food systems, and engages in innovative processing and marketing.”

“We don’t offer a definition of RA for two reasons: the benefits of defining RA are disputed (as we subsequently discuss), and in NZ any such definition would need to be anchored in te ao Māori, the Māori worldview, and the goals, visions, priorities and aspirations of whānau, hapū, iwi and Māori corporations for how kai (food) is produced, and how whenua (land), wai (water), and rangi (sky) interact with tangata (people). While the potential relationship between te ao Māori and RA is acknowledged here, it is not explored in detail. Māori agribusinesses, landowners, and tangata whenua generally (the Māori people of NZ) need more time to determine their goals and priorities.”

“The term ‘regenerative agriculture’ is sometimes used as equivalent to ‘sustainable agriculture’, while including concepts akin to ‘restoration ecology’. As such, it denotes a range of farming systems aiming to reverse the

harm caused by intensive agriculture and continuously improve the farm system.”

A small group of NZ RA farmers and practitioners, considered to be leading innovators by their community, informed the development of 11 principles for RA within the farmgate (on farm) shown on the next page.

Figure 5 - Regenerative principles being applied in NZ. 11 principles were identified by a focus group of 21 leading RA practitioners (RA farmers and educators). In: Lang et al. 2021



1.	The Farm is a living system	Living systems are complex and constantly evolving - understanding how nature functions supports holistic decision-making.
2.	Make context-specific decisions	Context varies from place to place, person to person and season to season - adapt your system and practices to suit.
3.	Question everything	Be curious, question your beliefs and test different ideas.
4.	Learn together	Connect with like-minded peers to speed up the learning journey - include perspectives different from your own.
5.	Failure is part of the journey	Push beyond your comfort zone - small failures provide the best learning opportunities.
6.	Open and flexible toolbox	Try practices that help improve ecosystem function while keeping others up your sleeve for it or when you need them.
7.	Plan for what you want; start with what you have	Transitions take time - clear goals, monitoring and planning are key.
8.	Maximise photosynthesis (year-round)	Treat your farm like a solar panel - bigger green leaf area supports greater photosynthesis meaning more food for soil microbes and improved soil health.
9.	Minimise disturbance	Keep the soil covered and limit disturbance from chemical application, soluble fertiliser, machinery and livestock compaction.
10.	Harness diversity	Diversity benefits the whole ecosystem - microbes, insects, plants, birds, livestock and your community.
11.	Manage livestock strategically/holistically	Livestock are a powerful tool for building biological function and fertility in our soils, when managed well and adaptively.



Rodale Institute - *Regenerative Organic Certified™*

Robert Rodale coined the term “regenerative organic” to describe a holistic approach to farming that encourages continuous innovation and improvement of environmental, social, and economic measures. For Rodale, “regenerative” is going beyond organic. The number one priority in Rodale’s vision of regenerative organic agriculture is soil health. Regenerative prioritizes soil health while simultaneously encompassing high standards for animal welfare and worker fairness. The idea is to create farm systems that work in harmony with nature to improve quality of life for every creature involved.

Together with other industry players and science organisations, the Rodale Institute is a founding member of the Regenerative Organic Alliance. The ROA oversees Regenerative Organic Certified™, a certification for food, textiles, and personal care ingredients. ROC™ farms and products “meet the highest standards in the world for soil health, animal welfare, and farmworker fairness.” in line with the following framework:



The Three Pillars Of Regenerative Organic Certified



Soil Health

- Builds Soil Organic Matter
- Conservation Tillage
- Cover Crops
- Crop Rotation
- No GMOs or Gene Editing
- No Soilless Systems
- No Synthetic Inputs
- Promotes Biodiversity
- Rotational Grazing



Animal Welfare

- Five Freedoms
 - Freedom from discomfort
 - Freedom from fear & distress
 - Freedom from hunger
 - Freedom from pain, injury or disease
 - Freedom to express normal behavior
- Grass-Fed / Pasture-Raised
- Limited Transport
- No CAFOs
- Suitable Shelter



Social Fairness

- Capacity Building
- Democratic Organisations
- Fair Payments for Farmers
- Freedom of Association
- Good Working Conditions
- Living Wages
- Long Term Commitments
- No Forced Labour
- Transparency and Accountability



Patagonia

Patagonia is a registered B Corp™ in the fashion industry that prides itself on being at the forefront of sustainability-linked initiatives. In 2020, it launched its own programme (as well as helped establish the Regenerative Organic Alliance and its accompanying ROC™ certification).

Read more about this programme [here](#).

For Patagonia, Regenerative Organic Farming practices help build healthy soil that could help draw down more carbon from the atmosphere than conventional methods. To do this, Patagonia's farmers use a range of methods:

ORGANIC

Organic farming means no synthetic pesticides, fertilizers, genetically modified organisms, antibiotics or growth hormones.

COVER CROPS

Farmers grow cover crops in addition to their cash crop to help increase soil organic matter, sequester carbon in the soil, and reduce erosion.

COMPOST

Farmers use waste from the farm and convert it into compost, which acts as a natural fertilizer and pesticide for soil.

INTERCROPPING

Planting multiple types of crops closely together can produce greater yields and improve soil health over time.

CROP ROTATION

A systematic approach where crop varieties are rotated from one year to the next.

LOW- TO NO-TILLING

Tilling is a common practice that involves digging, stirring, and overturning soil.

Reducing the need for this practice can help soil retain more water, organic matter and potentially store more carbon.



Danone

Danone is a multinational food-products corporation with over 50% of global sales now covered by B Corp™ certification who made large announcements and commitments to a “food revolution”. Read more [here](#).

Danone state that “It (RA) is not about certification but about transformation”, and define regenerative agriculture — which includes organic production — as a set of farming practices that:

- Protects soil, water, biodiversity;
- Respects animal welfare;
- Acknowledges the key role of farmers and the positive impact of farming, while taking into account its economic viability.

To help “engage farmers and accompany them through the regenerative agriculture journey” Danone have created a assessment tool that “can define a specific roadmap for each farmer to support him / her / them in developing more sustainable agricultural activities.

To promote continuous progress, Danone has set a 3 year time frame for each farmer to reassess his / her / their farm using the group’s scorecard latest version.”
You can read more [here](#).



Pure Advantage

Pure Advantage is a registered New Zealand charity led by business leaders and supported by a collective of researchers and writers who investigate and promote opportunities for New Zealand to fulfil its massive potential for green growth.

Amongst their work PA produced an in depth campaign relating to regenerative agriculture in New Zealand - "Our Regenerative Future".

We have highlighted some key soundbites from that campaign below.

“Regen ag on the other hand is not just about reducing harm, but seeks to actually improve the health of the land, waterways, the animals that live on it, and people that benefit from it. Taking a whole-system approach, it encourages farmers to pay close attention to what individual pastures, fields, gardens, and plots of land need in order to function more like natural ecosystems, while simultaneously seeking to improve farmer wellbeing and animal welfare. In practice, that might look like zero tillage, continual cover, increased pasture and crop diversity, the use of nitrogen-fixing cover crops, the avoidance of synthetic fertilisers and pesticides, and longer rotational periods for stock to give plants a longer time to recover.”

— ALINA SIEGFRIED

“Definitions and principles vary a little depending on who you talk to, and regen ag is achieved through the practices and processes of a number of related land management approaches including; organic farming, holistic land management, permaculture, biodynamic farming, carbon farming, silvopasture, agroecology, and conservation agriculture.”

— ALINA SIEGFRIED

“Adopting regen ag is about doing what’s right for the land and farming with less harm; reducing or eliminating inputs from synthetic additives while enhancing the cycles of nature. Regen ag is not a one-size-fits-all approach, though certain themes are shared across agricultural contexts.”

— SIMON MILLAR, SECRETARIAT / PURE ADVANTAGE

“In the context of agriculture, the terms organic and regenerative are closely linked and are sometimes incorrectly used synonymously, yet they are not the same. Organic agriculture is prescriptive in terms of inputs, eliminating the use of synthetic fertilisers and pesticides, veterinary drugs, genetically modified seeds and breeds, preservatives, additives and irradiation.”

— ALINA SIEGFRIED





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